

# Reed College Department of Economics

## Senior Handbook

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## About this document

Each year Reed College publishes an official Senior Handbook that gives the official college deadlines and regulations for the senior year (<http://www.reed.edu/registrar/pdfs/senior-handbook.pdf>). This document supplements the official handbook with deadlines, regulations, and recommendations specific to the Economics Department. The official handbook remains the definitive source for college-wide rules and deadlines; nothing in the department handbook should be inferred to override it.

## Assignment of thesis adviser

Students describe several potential thesis topics as part of the junior qualifying exam. Just prior to the beginning of the senior year, the department chair asks rising seniors for an update on their preferred topic and adviser(s).

The department faculty meets at the beginning of each semester to assign each student a thesis adviser and first-draft reader. Students may be assigned an adviser other than the one requested in order to balance the advising load among faculty. When this is necessary, the department will attempt to achieve the best possible overall fit between topics and advisers.

Students with interdisciplinary majors such as Math-Econ may have advisers in both departments. An economics adviser will be assigned by the process above. Consult with the other department for more information on how it assigns advisers.

## Deadlines

There are four deadlines during the thesis year. Of these, only the second (end of first semester chapter) is specifically an Economics Department deadline. To verify the exact dates of the college and division deadlines, look at the current college-wide Senior Handbook.

### Thesis proposal: Noon on Monday of 4<sup>th</sup> week of first thesis semester

- **Whose deadline?** This deadline is imposed by the Division of History and Social Sciences, but the Economics Department also applies it to interdisciplinary majors that include economics.
- **What?** This proposal is brief (one page is sufficient) and can usually be an updated copy of the thesis topic submitted for the junior qual. No adviser's signature is required; if you want

your adviser's feedback on your proposal, you should allow several days for this process prior to the deadline.

- **How to submit?** The proposal is submitted in Moodle on the HSS thesis proposals page.

#### First chapter(s): Last Friday of your first thesis semester

- **Whose deadline?** This is a department deadline. The last Friday is the department standard, but your adviser may set an earlier deadline.
- **What?** Work with your adviser to determine exactly what should be included in your first chapters. The usual expectation is (1) a short introduction that describes your thesis question and how you propose to answer it, and (2) a literature-review chapter that surveys the existing literature relating to your topic.
- **How to submit?** You should deliver copies of the chapter(s) directly to your adviser and your first-draft reader, and also to any co-adviser from another department in the case of interdisciplinary majors. Check with these people to ascertain whether they prefer to receive your draft chapters in paper or electronic form.
- **What's next?** You should expect to get feedback from each faculty member within about a week. Once you have read the comments you should schedule a meeting to discuss them with your thesis adviser and plan your direction for the second semester. Some advisers prefer to meet jointly with the student and the first-draft reader (and the interdisciplinary co-adviser, if any) in a brief "mini-oral" conference if their schedules allow. Check with your adviser to determine what is expected of you.

#### First draft: Noon on Friday of 8<sup>th</sup> week of second thesis semester

- **Whose deadline?** This is a history and social science deadline. *This deadline is strictly enforced and the penalty for not meeting it is grim!* If you do not submit an acceptable first draft on time, you will not be allowed to attend commencement or to receive your degree with the rest of your class. Exceptions are rare and must be based on serious extenuating circumstances beyond the student's control, so do not take this deadline lightly. Again, your adviser may impose an earlier deadline.
- **What?** The draft you submit must be a complete thesis of sufficient quality that it would receive a passing grade as a final draft. It must be logically complete with all chapters and elements (title page and other forematter, table of contents, tables, charts, references, bibliography, etc.) in place. All citations and references must be complete.

- **How to submit?** Two copies must be submitted in paper form to the HSS administrative assistant before noon. No adviser signature is required. (An additional copy may be required for interdisciplinary co-advisers.) The administrative assistant will record your submission and return the copies to you for distribution. It is always better to deliver drafts to the faculty member's office rather than the Eliot Hall mailbox; some faculty do not check their Eliot boxes frequently.
- **What's next?** You should expect comments back from the faculty within a week to ten days, depending on faculty thesis loads and the timing of break. It may be useful to schedule a meeting with each faculty member once you have read the comments. The thesis is typically revised extensively after the first draft. Additional research may be done and sections or even chapters may be added in the five weeks between the first-draft and final-draft deadlines.

#### Final draft: 3pm on the last Friday of the second thesis semester

- **Whose deadline?** This is a college-wide deadline. Note that for students finishing a thesis in the fall semester, this is *not* the last day of classes, but rather the calendar Friday *before* the final, abbreviated class week.
- **What?** This is the final draft of your thesis on which you will be examined in the oral examination and on which you will be graded. Obviously, it must be complete and conform to all of the requirements for formatting and content.
- **How to submit?** You must get your adviser's initials, usually on the bag containing your thesis, prior to submission. Four copies (or more if there are more members of the orals board) must be submitted to the registrar's office prior to 3pm. Be sure to plan getting the adviser's signature in advance because some faculty members leave campus early on Fridays. You should also plan duplication of your thesis in advance because the print shop is very busy at this time.
- **What's next?** Again, you will get the copies back after the registrar has recorded them as submitted. Fill in the form on the outside of each bag with your name and the time/date/location of your oral exam and distribute them to the members of your orals board. Again, it is strongly recommended that you take the copies to faculty offices rather than using the Eliot Hall mailboxes; some faculty do not check the Eliot boxes regularly. You should not expect any feedback prior to the oral exam.

## Funding for thesis work

You should expect to pay for routine thesis expenses such as printing, copying, and binding. If you encounter more expensive thesis expenses there are several sources of support for which you can apply. Among the expenses that have been supported are payments to experimental subjects, acquisition of data sets and library materials, mailing expenses, computer software, and small items of computer hardware such as flash drives and external hard drives. The department will pay for a one-year license to Intercooled Stata for seniors doing empirical thesis research. Travel is supported only in extraordinary circumstances. Any materials purchased through these programs remain the property of the college and must be returned at the end of your thesis work.

These expenses are normally reimbursed by the department's administrative assistant upon presentation of receipts.

### Initiative Grants for Undergraduate Research (IGUR)

The IGUR program is college-wide and is administered by the Undergraduate Research Committee (URC). Guidelines and deadlines for applications are at <http://www.reed.edu/beyond-reed/students/fellowships-awards/sponsored/initiative.html>. There are several deadlines for consideration throughout the fall and spring semesters, so check the Web site and make sure that your proposal is submitted prior to the deadline in order to receive prompt consideration. Matching funds from the student's department are often required for IGUR grants, so you will likely send your proposal to both the URC and to the Economics Department for joint consideration. Economics students are eligible for IGUR support, but IGUR applications are not required for thesis support. Most economics students will find it more convenient to apply for department funding, as described below, rather than IGUR funding.

### Economics Department thesis funding

Donations from several alumni and other friends of the department have established funds that the department can use to support student research as well as other activities. You should discuss options for support with your adviser. Requests for department support should follow the same format as the IGUR proposal and should be submitted to the department chair. There are no fixed deadlines for requesting department support and response is usually prompt.

## Non-financial thesis support resources

In addition to the advice of the faculty, thesis students receive support from college academic support offices such as the library and computer user services.

### Library resources

Librarians are professionals who specialize in finding academic information. Thesis students need academic information. The match is obvious, so you should make contact with the economics support librarian early in your thesis process and as needed thereafter.

The library staff has prepared a resource guide specifically for economics students at <http://lib-guides.reed.edu/economics>. This site has online resources for finding both textual material and economic data. It also has a schedule of support workshops offered by library staff on topics useful to economics thesis students.

Should you find books that are important for your research but that are not held by the library, you may obtain them temporarily through Summit or interlibrary loan or you may request that the library purchase them. Purchase requests will be evaluated by the library and the department, largely based on the potential usefulness of the item to future students.

### Data acquisition and analysis resources

To provide better support to students in the social sciences (and other disciplines) who use data, a joint program among the library, computer user services, and academic support services now provides integrated consulting to help you find and obtain the data that you need. You can find out more about the staff and the services they offer at <http://www.reed.edu/data-at-reed/index.html>.

This group also provides user support—online tutorials, links to information, and individual consulting—for users of Excel, Stata, R, and other software common in data analysis.

### Writing support

Every thesis student encounters times when writing is a struggle. The Writing Center is part of Academic Support Services, located in the Dorothy Johansen House (DoJo), and is there to provide workshops and free one-on-one support for thesis writing. This help can be at a macro level—organizing your thesis or planning your time better—or at a more micro level such as proofreading a few pages or suggesting revisions. For more information, see or <http://www.reed.edu/writing/>.

## Meetings with your adviser

Most thesis students meet with their advisers once per week throughout the academic year. Meetings usually last about 30 minutes. Some advisers schedule occasional or regular joint meetings with all of their advisees to discuss general issues that all will confront.

Don't think of the individual thesis meeting as a "class," where you go in prepared to absorb whatever the instructor wants to tell you. The meeting agenda is usually up to you: What progress have you made? What problems or questions have you encountered? What are you planning to do next? To make the most of your thesis meetings, keep a thesis notebook (physical or electronic) with a page each week for "Questions for adviser." Use that page to accumulate questions related to what you are doing, then bring it to the thesis meeting and use it to set the agenda.

Progress on the thesis should be consistent throughout the year—the thesis is much too big a project to leave until the end—but even the most conscientious thesis students will have an occasional week in which they either don't make much progress or don't have anything that requires the attention of the adviser. If that happens, don't waste your time and your adviser's time having a meaningless meeting. Send an email to your adviser the day before the scheduled meeting describing the situation and suggesting that there is no need to meet. It is not usually a problem if this happens a few times during the year provided that good progress is made during the other weeks. It *is* a problem if cancelled meetings happen regularly.

Your adviser will often ask for written materials before the meeting, such as drafts of sections of the thesis or tables of regression results. Unless your adviser tells you otherwise, everything that is submitted to him or her should be appropriately proofread, be spellchecked, and have appropriate citations using the department's preferred citation style (see below). Do not waste your adviser's time fighting through your text to correct spelling and grammar. Such errors distract attention from the economic content, which should be the adviser's primary concern.

## Role of the first-draft reader

For economics majors, the first-draft reader is assigned by the Economics Department at the beginning of the thesis year. When possible, the department assigns the person who, apart from the adviser, is most familiar with the fields of economics that apply to your thesis question.

The formal roles of the first-draft reader are three:

- Reading and providing feedback on the chapter(s) submitted at the end of the first semester



- Reading and providing feedback on the first draft of the thesis in the second semester
- Reading the final draft of the thesis and participating in the oral examination.

Beyond that, your first-draft reader can serve as an “associate adviser.” It is wise to seek the advice of the reader periodically throughout the thesis research, particularly if you have questions that relate to the reader’s fields of expertise. Consider this person to be a resource that is available to you as needed to support your work.

## Mechanics of writing a thesis

Writing a thesis is a huge undertaking, probably bigger than anything you have ever done. Unlike course papers or studying for exams, a thesis cannot be written in a day, a week, or even a month. It requires sustained effort through the entire academic year to create a successful thesis. Here are some tips to help make the process smoother.

### Word or LaTeX?

Theses are written in either Microsoft Word or in LaTeX. Which one should you use? Both are totally acceptable for an economics thesis. Moreover, any thesis can be written and made to look beautiful with either software. But there are some advantages and disadvantages to each.

Word is the dominant word-processing software in the world market and, as a result, Word documents are almost universally portable. Some advisers like to use Word’s “track changes” feature to make suggestions or corrections in your drafts. This allows you to simply “accept” (or “reject”) the suggested change without having to type it into the draft yourself. While LaTeX specializes in formatting equations and tables, Word can do tables equally well and has an equation editor that produces totally satisfactory equations with a full array of mathematical symbols.

LaTeX tends to be the preference of mathematicians and is marginally handier with equations and tables. Its disadvantage is that your thesis is a “script” telling LaTeX what to do, which must then be compiled to a pdf in order to see how the document will appear. Because you will send your adviser the pdf, he or she cannot simply edit the document directly to recommend changes but must instead insert comments into the pdf file, which you then need to transcribe yourself to the LaTeX script.

As always, check with your adviser to see if he or she has a preference.

### Thesis template

The Computer User Services staff have created thesis templates for both Word and LaTeX to handle all the mundane formatting tasks and to assure that your thesis will be in acceptable form. Use them

from the very start of your thesis writing. This is important because text that has formatting from another template (and every document has a template whether you realize it or not) may carry inappropriate formatting with it when copied and pasted into the thesis template. This can undo all the advantages that you get from having the thesis template in the first place.

Rather than starting with a bunch of disparate pieces and assembling them into a thesis (and into the thesis template) later on, it is useful to start by setting up a document in the template with tentative chapters (perhaps according to the outline suggested below). As you read and do research, type what you have learned into appropriate sections of the emerging thesis. When you finish your research, *voilà*, you have a thesis!

### Citations and references

In the course of doing research for your thesis you will read dozens if not hundreds of articles, books, and chapters. Keeping track of them so that you can cite them properly can be a massive undertaking if not done properly.

There are two software packages, Endnote and Zotero, that are both available to students at no cost through the Reed Web site. These programs do two things for you:

- They act as a database for all of your thesis-related sources, keeping track of details like page numbers and journal volume/issue numbers.
- They interface with Word or LaTeX to place correctly formatted citations and a complete bibliography into your document without you having to retype anything.

The library staff conducts classes each semester on the use of both programs. Take a class early on and then use one or the other to keep track of your sources from the very beginning, being careful to enter all the relevant information (author, title, journal name, volume and issue numbers, page numbers, etc.). Once these are in Endnote or Zotero you will never have to find them again.

Citing the works that you use is critically important: failure to cite properly is academic misconduct and can lead to harsh penalties—even to expulsion from the college for serious plagiarism. The Economics Department prefers the Author (Date) citation style of the Chicago Manual of Style and has created a document discussing citation practice and showing common forms of citation that economics students might need at <http://www.reed.edu/economics/parker/Citation%20Guide.pdf>. For additional help with citations (especially relating to online materials and data sources), the Reed Library has a guide at <http://libguides.reed.edu/citation> and the Chicago Manual of Style itself can be accessed interactively at <http://www.chicagomanualofstyle.org/home.html>.

When you start using Endnote/Zotero, set the citation format to correspond to the Chicago Manual of Style and it should do the work for you. (Note that Chicago has two different formats: the foot-note format that is more common in the humanities and the author-date format that is used in scientific work. This isn't Hum 110: use the latter.)

### Who is your audience?

Articles in professional economics journals are written for economists. Textbooks are written for students. But who is the intended audience for your thesis?

It will be read not only by faculty economists and future economics students, but also by outside members of your orals board who may have little or no background in economics ... and maybe even by your grandparents. This presents a challenge because you have to find a target audience somewhere in the middle.

You won't go far wrong if you assume that your reader understands economics at the level of Reed's Econ 201 course, but nothing beyond that. It is unnecessary to explain basic economic concepts such as supply-demand analysis, utility and profit maximization, and the basics of aggregate demand and supply in macroeconomics. However, you should provide a brief introduction to ideas that most Econ 201 students would not have studied. For example, if you use concepts (to choose just a few) such as purchasing-power parity, contestable markets, efficiency wages, game-theory models, or models of moral hazard or adverse selection, you should take a paragraph or a page to introduce the basic ideas to your readers. In general, it is probably better to aim too low than too high. Your adviser will be able to guide you in setting the proper level.

### Outline of a typical economics thesis

Every thesis is unique and very few exactly follow the template below, but most economics theses have sections or chapters covering these topics in approximately this order.

#### Introduction

Your introduction states the question that you're trying to answer in the thesis, and then summarizes how you go about obtaining the answer and what your answer is. Obviously, you cannot write the complete introduction until the very end, but the first part—what your question is—should be the starting point of your thesis process. This part of the introduction should be submitted along with the literature review at the end of the first semester.

## Literature review

The first step of thesis research is usually to search broadly in the economics literature to discover what other economists have found that relates to your question. Depending on your topic, you may find a dozen papers or hundreds, so it's hard to generalize about the length of the literature review.

During your initial reading, the nascent literature review chapter can serve as an archive of your notes about what you've read, with each study getting its own short summary. As you proceed (and before you submit it at the end of the first semester) it should be reorganized by topic with sections summarizing the results of all of the studies you found on each major topic.

The amount of detail devoted to any individual paper varies greatly. Papers that are closely related to your thesis research often require several pages, sometimes including tables of key results. Papers that are merely background or of historical interest may warrant only a brief mention. Although you submit the literature review at the end of the first semester, you will likely need to revise it later because it is often not clear exactly which papers are most important until the direction and outcome of your thesis emerge. Some studies that seemed important at mid-year may not relate closely to the final thesis, while others that seemed tangential earlier may become central and require more complete treatment.

In the completed thesis, your literature review provides the reader with the background necessary to understand your thesis work and how it fits into the broader discipline. You should reexamine the literature review at the end of your thesis writing and adjust the content to make sure that it gives the necessary information.

Note that the literature review in a Reed thesis is usually much longer than those in the journal articles you are accustomed to reading. The literature review section of a journal article is usually brief (often just a sentence or two) and uninformative because (1) the reader is assumed to be familiar with the literature in the field, and (2) journals operate under tight page constraints so longer reviews are discouraged. Neither of these conditions applies to a Reed thesis: most of your readers will be unfamiliar with the literature and there is no page limitation. If you are in doubt, always check with your adviser about the appropriate breadth and depth of your literature review.

## Data and methods

Once the reader knows what question you are trying to answer and what answers other scholars have found, you need to tell the reader how you are going to go about your research. There should be a chapter or section in your thesis telling exactly where you obtained the data you used. Give the

broad outlines in your text: “My real output series is the output-side real GDP series from Version 9 of the Penn World Tables (Feenstra, Inklaar, and Timmer 2015).” Also be precise about the units of measure: Is it in domestic prices, U.S. dollars, an index number, or something else? Is it aggregate or per-capita?

The description of your data should be sufficient for a future thesis student to replicate your results. If providing that information requires a lengthy and detailed description that would distract from the flow of your text, you should put it in an appendix to which you refer in the text. All data sources used should be cited in your bibliography.

The data section is also the place to assess the weaknesses of your data. Economists can rarely measure exactly what they want and nearly all measurements are imprecise. We do not expect you to have perfect data but we do expect you to understand their limitations. You don’t need to tell the reader that GDP numbers are not perfect, but if you are using GDP to proxy for something else (for example, for a nation’s wealth) then explain why that is a reasonable variable to use as a proxy given that nothing better is available. You should also explain what problems may arise with your proxy variable (to continue the example, GDP fluctuates much more than wealth over the business cycle, so the quality of the proxy will depend on whether the country is in recession or at full employment).

You also need to describe in detail the statistical or econometric procedures you use to analyze your data. You should provide a description and rationale for all of your econometric methods, especially more advanced models such as fixed effects, time-series methods, probit/logit, etc. Include an appropriate citation to an econometrics text or paper that describes the method in more detail.

It is always appropriate to include any do-files that you used to construct your data set or estimate your models in an annotated appendix to the thesis. This is essential if your work requires analysis more complex than an obvious combination of Stata commands.

Thesis students often use previous theses as models for their own work. Some theses are updates, extensions, or revisions of earlier thesis work. You can facilitate this process by leaving copies of your data set and do-files for future students to build upon. These can be left as a CD or DVD in pocket in the thesis cover or by depositing the data/programs along with the thesis in the Electronic Thesis Archive. Your adviser can also serve as a repository for these files.

## Results

This section of the thesis describes what you found when you completed your research. Depending on the volume of detail you need to present, you may separate the statement of the results from the analysis and interpretation as separate chapters/sections or you may combine them.

Most economics theses have extensive tables, but *do not let the tables tell your story*. The reader should be able to understand your important results from reading the text without looking at the tables: the text tells the story, referring to the tables as necessary. However, not every number in your tables is important enough to be discussed in the text. Limit your textual discussion to the results that bear significantly on your thesis question and let interested readers examine the tables for other results.

Sometimes the volume of the econometric results is overwhelming, with huge tables that don't fit easily on one page or multiple variants and models that require a half-dozen or more tables. In such cases, it is appropriate to include in the thesis only the part of the table that is important, or only one or two of many alternative models. The full tables should then be in an appendix for those readers who are interested in the parts of the results that are less important for your argument. There is no page limit, but too many long tables in the text can interrupt the flow of your argument.

Also, it is very hard to read tables that do not fit on a single page. Tables can be single-spaced and, if necessary, you can use a slightly smaller font in order to fit them on a page. You can also format the tables in landscape rather than portrait if they are wide and fit better sideways. The experts at CUS can help you with the formatting.

## Analysis and interpretation

If your results themselves require many pages, you may want to use a separate chapter or section to analyze what the results mean. This is particularly appropriate if the interpretation requires something more than just reading a coefficient or test statistic from a table. After reading this section, the reader should understand fully how you interpret the economic implications of your results.

This section of the thesis can often be used to compare your results with those of previous studies. Summary tables with results from several studies (including yours) may be appropriate if the numbers are directly comparable.

## Conclusion

The conclusion summarizes the entire thesis. It also provides a place for you to assess the strengths and weaknesses of your study. Most conclusions include a list of ways in which you would improve the study if you had more time, access to better data, or could be released from other constraints that

held you back. (This last sentence is a ubiquitous question at the oral exam, so it is a good idea to anticipate it in the thesis.)

The conclusion is the last word of your thesis: send readers off with the message that you want them to remember.

## Oral examination

The oral examination (“oral”) is the culmination of your thesis year. It is a celebration of your work as much as a formal “examination.” The tone of the meeting is generally friendly and supportive: we want you to succeed in presenting and defending your work in this formal setting. Take the oral seriously, but do not dread it! Think of it as an opportunity to spend approximately 1½ hours talking with a group of really smart people about a topic (your thesis) that you know more about than they do.

### Scheduling

Orals scheduling is a complex process with many interdependent considerations. The orals schedule is published on the day that first drafts are due. The History and Social Science (HSS) division schedules 50 to 80 orals (in the spring semester) spread over 20 time slots in such a way that HSS faculty members do not have time conflicts. Changes are usually impossible.

Most oral exams are in one of the following time slots: 10–11:50, 1–2:50, 3–4:50. The 8–9:50 time slot is used sparingly except in years with a large number of HSS seniors.

### Orals board

For economics orals, there are usually four faculty members present as “examiners”:

- Your thesis adviser
- The first-draft reader (usually another economist)
- A third member from another HSS department (assigned by HSS)
- A fourth faculty member from outside of HSS that you choose and whose participation you arrange in the weeks before the oral. (You should begin soliciting possible fourth members by email or in person as soon as the orals schedule is published.)

For interdisciplinary majors, the co-adviser and sometimes another faculty member from the other department will be part of the orals board, which may replace or be in addition to the members above.

Occasionally, the student and adviser may agree that it is appropriate for a person from outside of the Reed faculty to observe or participate in the oral. For example, if your thesis does work that is of direct interest to a policymaking agency, a representative of that agency would be a suitable participant in the oral. Such arrangements are determined by the student and adviser.

### Distributing the final thesis

As soon as your thesis copies have been submitted to the registrar and returned to you, distribute them to the members of the orals board. The Reed Print Shop will stamp a form on the cover of your bags. Before distributing the copies, fill in your name and the date, time, and location of your oral exam in the blanks on the form. This makes it easier for the faculty members reading your thesis to remember when and where to go.

It is better to walk the copies directly to the faculty members' offices, leaving them under the door or in the box outside if the faculty member is not present. Some faculty members only check their Eliot mailboxes infrequently and you don't want your thesis to get lost or neglected!

### Food?

For many decades it was a tradition at Reed that seniors would bring food to the oral for joint consumption. *Do not feel obligated to bring food!* This tradition has waned a bit in recent years and it is certainly not the responsibility of the senior to impress the faculty with an imposing spread of comestibles. The Economics Department will reimburse you up to \$25 for food purchases. Reimbursement requires a receipt which must be submitted to the department's administrative assistant no later than the Wednesday of final-exam week. (This is to make sure that you get your money before commencement.)

If you decide to bring food, keep it simple. For a morning oral, bagels or pastries are likely to be welcome along with fruit juices and/or coffee or tea. In the afternoon, cheese and some sort of crackers or bread is a nice choice. Keep in mind that some faculty members are vegetarian or vegan when you are choosing food. (It's a good idea to ask the members of your board about this.) And don't be surprised or offended if some members of the orals board do not eat or drink anything. They may have three or even four orals that day and that can be too much food.

Do not bring alcoholic beverages!



## What happens in the room?

No formal presentation is required for economics orals. You are not expected to prepare slides and present your work as though you were at a conference. (This style of presentation is the norm in some departments at Reed, but not economics.)

Have a copy of your printed thesis with sticky notes marking major tables or sections of the thesis that you might want to find quickly.

The traditional first question is “How did you get interested in your thesis topic?” Use this question to segue into a brief (no more than 10 minutes) summary of your thesis. You will probably be interrupted with questions during your summary and then the oral proceeds apace.

The orals board will continue to ask questions for about an hour and a half. If you need time to think about a question, take it. You may ask for clarification if you don’t understand the question. Your adviser may intervene to clarify the question or to guide you toward the answer if you seem really to be struggling.

After about 90 minutes, your adviser will ask you to leave the room for a few minutes while the board members discuss your thesis and your oral. Don’t stay close enough to hear through the door, but don’t go too far away either. After the brief deliberation, your adviser will invite you back into the room where everyone will congratulate you and return the thesis copies, which they may have marked with comments.

You should recognize that your board members are likely to have other orals immediately following yours so there may not be time for extended discussion. There is probably also another senior who needs to get into the room and set up, so any follow-up conversations with board members should occur outside the room. You may want to set up an appointment with your adviser to discuss the thesis and the oral at a later time.

## Thesis grade

You will be assigned a grade for your thesis, but like other grades at Reed it will not automatically be shared with you. Reed thinks of the thesis as a two-unit, full-year course. Your grade in the course depends not only on the “final product” (the thesis), but also on the process by which it was produced and on your demonstration (at the oral) of a solid understanding of your work and its strengths and shortcomings.

The adviser assigns the grade, but usually solicits input from the other members of the orals board. The first-draft reader, having been involved in the process as well as the product of the thesis, can provide important input.

## After the oral

Once your oral exam is complete you are almost, but not quite, finished with the thesis process. There are a few formalities that have to be completed before you are certified for graduation.

### Editing after the oral?

The thesis you submit on the final Friday of the semester is the final draft. So can there be a “post-final” draft? Advisers and departments do not all answer this question in the same way. However, extensive re-writing, addition of sections, or redoing regressions is only allowed in highly unusual circumstance.

Minor changes such as the following are generally permitted and expected: correction of simple typographical errors or misspellings, fixing any problems with the bibliography, finalizing the dedication and acknowledgements, and perhaps a sentence of clarification here or there. This is *not* another draft of the thesis; it is a “cleaned-up” version of your final draft.

### Binding and submitting your thesis

The Reed Print Shop in the basement of Eliot Hall is your one-stop thesis-finishing service. They will perform all of the printing and binding services, making sure to use the appropriate paper and bindings so that the library will accept your copies.

You will need your adviser’s signature (both advisers if there is a co-adviser on an interdisciplinary thesis) on the signature page of all copies (or at least the library copies) of the thesis. This can be done either before or after binding.

Two copies of the thesis (bound and on archival paper) must be submitted to the library by the appropriate deadline. (See the Reed Senior Handbook for details.) Failure to submit your thesis copies on time may jeopardize your participation in commencement activities, so make sure that you get it done.

Seniors nearly always make additional bound copies of the thesis. One copy should go to your adviser. You probably want a copy for yourself and maybe additional copies for parents, grandparents, significant others, and so on. Most seniors end up making four or more.

## Electronic thesis archive

The Reed Library will keep one copy of your printed thesis in the Thesis Tower and the other printed copy in its private, non-circulating archive. You are also encouraged to deposit an electronic copy in the Electronic Thesis Archive. See <http://library.reed.edu/theses/index.html> for details about how to submit your thesis electronically and what happens to it once it is in the archive.

You may also submit supplemental materials such as your data sets and programs to the archive for the use of future thesis students and other scholars. Access to the thesis archive is currently restricted to the Reed community, but you should be careful about including proprietary data that you have agreed not to release to others. Ask the librarians if you are unsure what data can be released.

## Congratulations!

Once your thesis is bound, signed, and submitted you are ready for graduation! Enjoy your last days on campus with your friends and visiting family. The Reed senior thesis is the culmination of a uniquely challenging academic enterprise; you should feel justifiable pride in joining the ranks of Reed graduates!